

WHAT IS CLAIMED IS:

1. A planar light source device, comprising:  
a plurality of light sources emitting different  
5 colors of light; and

a light guide plate receiving light from the  
plurality of light sources at a side face to  
distribute the light over a surface thereof;

wherein a light emission angle differs among the  
10 plurality of light sources.

2. A planar light source device according to  
Claim 1, comprising a refractor mounted on an  
emission surface of each of the plurality of light  
sources for changing a direction of light, the  
15 refractor having a different shape for the different  
light sources.

3. A planar light source device according to  
Claim 1, wherein a light emission angle of a light  
source of the plurality of light sources emitting  
longer wavelength light is smaller than a light  
emission angle of a light source of the plurality of  
light sources emitting shorter wavelength light.

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4. A planar light source according to Claim 1,

wherein the plurality of light sources are red, green, and blue light emitting diodes.

5. A liquid crystal display device,  
5 comprising:

a planar light source device according to Claim 1; and

10 a liquid crystal panel placed above an emission surface of the planar light source, the liquid crystal panel having two substrates with a liquid crystal layer interposed therebetween.

15 6. A liquid crystal display device according to Claim 5, wherein the different light sources have different light emission angles in order that wavelength dependence of transmittance at a viewing direction in the liquid crystal panel is canceled out by wavelength dependence of luminance at the viewing direction in the planar light source device.

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7. A planar light source device, comprising:

a plurality of light sources emitting different colors of light;

25 a light guide plate receiving light from the plurality of light sources at side face to distribute the light over a surface thereof; and

a refractor refracting light from the plurality of light sources with different refraction angles for different colors.

5           8. A planar light source device according to Claim 7, wherein the refractor is formed on a side face of the light guide plate facing the plurality of light sources, the refractor having a different shape for the different light sources.

10           9. A planar light source device according to Claim 7, further comprising a prism plate mounted between the plurality of light sources and the light guide plate, wherein the refractor is formed on a side face of the prism plate facing the plurality of light sources, the refractor having a different shape for the different light sources.

15           10. A planar light source device according to Claim 7, wherein a refraction angle of longer wavelength light is smaller than a refraction angle of shorter wavelength light.

20           11. A planar light source according to Claim 7, wherein the plurality of light sources are red, green, and blue light emitting diodes.

12. A liquid crystal display device,  
comprising:

5 a planar light source device according to Claim  
7; and

a liquid crystal panel placed above an emission  
surface of the planar light source, the liquid  
crystal panel having two substrates with a liquid  
crystal layer interposed therebetween.

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13. A liquid crystal display device according  
to Claim 12, wherein the different light sources have  
different light emission angles in order that  
wavelength dependence of transmittance at a viewing  
15 direction in the liquid crystal panel is canceled out  
by wavelength dependence of luminance at the viewing  
direction in the planar light source device.

20 14. A planar light source device, comprising:  
a light source;  
a light guide plate receiving light from the  
plurality of light sources at a side face to  
distribute the light over a surface thereof; and  
25 a hologram diffracting different light at  
different angles.

15. A planar light source device according to  
Claim 14, wherein the hologram is placed between the  
light source and the light guide plate.

5 16. A planar light source device according to  
Claim 14, wherein the hologram is placed above an  
emission surface of the light guide plate.

10 17. A planar light source device according to  
Claim 14, wherein the hologram diffracts longer  
wavelength light at an angle while diffracts shorter  
wavelength light at a larger angle than the angle of  
the longer wavelength light.

15 18. A liquid crystal display device,  
comprising:

a planar light source device according to Claim  
14; and

20 a liquid crystal panel placed above an emission  
surface of the planar light source, the liquid  
crystal panel having two substrates with a liquid  
crystal layer interposed therebetween.

25 19. A liquid crystal display device according  
to Claim 18, wherein the hologram is arranged in order  
that wavelength dependence of transmittance at a

viewing direction in the liquid crystal panel is canceled out by wavelength dependence of luminance at the viewing direction in the planar light source device.

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